```
 AAA          H   H  U   U  M   M   AAA   N   N          N   N  EEEEE  TTTTT   SSSS
A   A         H   H  U   U  MM MM  A   A  N   N          N   N  E        T    S
A   A         H   H  U   U  M M M  A   A  NN  N          NN  N  E        T    S
A   A         HHHHH  U   U  M   M  A   A  N N N  -----   N N N  EEEE     T     SSS
AAAAA         H   H  U   U  M   M  AAAAA  N  NN          N  NN  E        T        S
A   A         H   H  U   U  M   M  A   A  N   N          N   N  E        T        S
A   A  _____  H   H  UUUUU  M   M  A   A  N   N          N   N  EEEEE    T    SSSS
```

```
TTTTT  X   X  TTTTT          1
  T    X   X    T           11
  T     X X     T            1
  T      X      T            1
  T     X X     T            1
  T    X   X    T      ..    1
  T    X   X    T      ..   111
```

START Job A_HUMA Req #89 for LEPREAU Date 6-Nov-80 22:57:30 Monitor: Univ of Utah Computer Science KL-20, TOP *START*
File PS:<LEPREAU>A_HUMAN-NETS.TXT.1, created: 29-Oct-80 12:34:37, printed: 6-Nov-80 22:57:31
Job parameters: Request created: 6-Nov-80 22:57:29 Page limit:18 Forms:NORMAL Account:OVERHEAD
File parameters: Copy: 1 of 1 Spacing:SINGLE File format:ASCII Print mode:ASCII

24-Oct-80 01:27:49-MDT,1715;000000000001
Date: 24 OCT 1980 0325-EDT
From: DUFFEY
Subject: Welcome to the HUMAN-NETS mailing list
To: LePreau at UTAH-20, Karl at MIT-XX

You have now been added to the HUMAN-NETS mailing list. You can address mail to this mailing list, by sending it to HUMAN-NETS@MIT-AI, or @MIT-MC, @MIT-ML, or @MIT-DMS. Please note that HUMAN-NETS is an extremely large mailing list that tends to generate large volumes of mail. To control this, mail sent to HUMAN-NETS is grouped into a digest which is redistributed once each day. This procedure will change in the very near future. The options that will be available to you will be fully explained at that time.

Local archives of the most recent mail sent to the mailing list are kept on MIT-AI, MIT-MC, and MIT-ML. To look at the recent mail, please read the file USERS2;HUMAN NETS on any of those machines. The messages are stored in chronological order.

A permanent archive of all messages sent to the list is kept in a sequence of files beginning with the file AI:DUFFEY;_DATA_ HUMNET. These messages are stored in reverse chronological order. Feel free to peruse it, but please be very careful not to modify it.

BTW, I am one of the maintainers of the mailing list. If you ever have any problems and/or questions about the list, please send mail to HUMAN-NETS-REQUEST rather than to everyone. (eg. if you sent a message to the list and got a cryptic error message in return, etc.) one of us will then reply directly to you with a solution/answer as needed.

Lastly if you tell someone about HUMAN-NETS please ask them to send their requests to be added directly to HUMAN-NETS-REQUEST@MIT-AI

Enjoy,

Roger

25-Oct-80 04:39:24-MDT,2153;000000000001
Mail from MIT-ML rcvd at 25-Oct-80 0439-MDT
Date: 25 OCT 1980 0630-EDT
From: DUFFEY
Subject: Digitalker, ethernet V2 #115

Today's Topics:
                    Speech Synthesis - Digitalker,
   Communicating via Network - Interest Groups, Networks - ETHERnet
——

Date: 24 Oct 1980 1649-PDT
From: ROODE at SRI-KL (David Roode)
Subject: National Semi "Digitalker" chip

Call 408-737-3939 to hear this chip in action.

————————————————————————————————

KWH@MIT-AI 10/24/80 17:50:48 Re: Oliver's

I think that Rand had an idea for a type of program/system called OLIVER, which models the personality of its user/owner and acts as a sort of secretary/double, making decisions in his place, setting appointments, voting at inconvenient board meetings, etc;

Ken

[OLIVER was an acronym standing for On-Line Interactive Vicarious Expediter and Responder. Toffler's book FUTURE SHOCK includes a brief, popular science style description of the idea. For a more recent, brief review of the requirements for this kind of advisor, see the section on "An Electronic Advisor/Companion" in the September 1980 issue of IEEE Spectrum. - RDD]

Date: 23 Oct 1980 2003-EDT
From: BILLW at MIT-DMS (William E. Westfield)
Subject: Ethernet...

Now that the Ethernet Specs have gone public (EET 13-oct-80), are they online anywhere that we (I) can get at them ?

Thanks
Bill W

Date: 24 OCT 1980 1313-PDT
From: SHOCH at PARC-MAXC
Subject: An ETHERnet query from HUMAN-NETS

1. The Ethernet spec is not available on line.

2. The spec is available from DEC (in Tewksbury), Intel (in Santa Clara), or Xerox (in Palo Alto) -- whoever you normally like to deal with.

   In particular, to get it from Xerox drop a note to:

        Bob Printis
        Xerox
        3333 Coyote Hill Road
        Palo Alto, California 94304

John Shoch

   [PS: Please feel free to distribute this to anyone interested in the Ethernet.]

26-Oct-80 03:41:10-MST,2071;000000000001
Date: 26 OCT 1980 0537-EDT
From: DUFFEY
Subject: disitalker, Crazed IBM worker

HUMAN-NETS AM Digest Sunday, 26 Oct 1980 Volume 2 : Issue 116

Today's Topics:
 Speech Synthesis - Disitalker, Computers and the Public - IBM madness

Date: 25 Oct 1980 0339-PDT (Saturday)
From: Lauren at UCLA-SECURITY (Lauren Weinstein)
Subject: Disitalker chip

Just in case anyone is interested, the Digitalker chip from National is another of the "stored speech" type units, using a compressed format (probably LPC, I can't find my reference). As usual with this sort of device, the vocabulary has to be specified to the manufacturer; it is generally not practical to do it yourself (same situation as with the TI "Speak and Spell" chip). Also, as usual, the prototyping board is ridiculously expensive, in this case something close to $500.

--Lauren--

Date: 25 Oct 1980 14:01:48-PDT
From: menlo70!daul at Berkeley
Subject: CRAZED COMPUTER WORKER

San Francisco Chronicle * Thursday Oct. 23, 1980
****

The IBM computer programmer who terrorized his Los Gatos neighbors last week during a 19 hour shooting rampage against imaginary rodents and out-of-control machines was charged yesterday with a felony count of brandishing a weapon.

Los Gatos Police Captain Bill Shuster said the complaint "will ensure" that Robert Chelboun continues to receive psychiatric treatment.

The 52-year-old Chelboun forced the overnight evacuation of 100 neighbors after he began firing 120 round in his luxury lakeside condominium last Thursday.

Authorities said Chelboun, who shot his telephone, television and home computer, claimed he was being overun by rats and machines.

Sheriff's deputies captured him at gunpoint after filling his two-story townhouse with tear gas.

Chelboun remains under observation at Santa Clara County's Valley Medical Center.

End of HUMAN-NETS Digest
****

27-Oct-80 02:46:27-MST,973;000000000001
Date: 27 OCT 1980 0438-EDT
From: DUFFEY
Subject: IBM non-nfluence on arpanet

HUMAN-NETS AM Digest Monday, 27 Oct 1980 Volume 2 : Issue 117

Date: 26 Oct 1980 2133-PST
From: the tty of Geoffrey S. Goodfellow <GEOFF at DARCOM-KA>
Subject: IBM and the ARPANET (and the Brooklyn Bridge).

From a sites bboard I clip:

Electronics, October 23, 1980, page 42.

"IBM to interconnect local networks"

...

"The IBM internetworking concept may be traced to the Arpanet system, to which the corporation was a prime contributor."

To which a user responds:

I think that IBM has contributed immensely to the success of the Arpanet: by its absence. I shudder to think of inflicting TSO on so many hapless people.

[I couldn't agree more. -Geoff]

End of HUMAN-NETS Digest
****

28-Oct-80 04:03:09-MST,2673;000000000001
Mail from MIT-ML rcvd at 28-Oct-80 0401-MST
Date: 28 OCT 1980 0550-EDT
From: DUFFEY
Subject: NSA, Harvest, cryptography, V2 #118

Security - Speech Understanding & Control of Crytography Research & Data Banks, Telephone Deregulation - FCC Computer Inquiry II,

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Date: 27 Oct 1980 19:44 PST
From: Newman.ES at PARC-MAXC
Subject: Speech-understanding programs;
Subject: Cryptology; NSA threats to freedom

The latest (November 1980) issue of THE PROGRESSIVE should be of interest to Human-Nets subscribers, since its cover story ("Somebody is Listening: There's a Computer on the Line") addresses several topics previously discussed by this list.

According to this article, the National Security Agency has developed a system called HARVEST, which can monitor millions of simultaneous telephone conversations, listening for certain key words or word combinations. HARVEST listening devices monitor American telephone company test boards, land lines, satellite-carried microwave transmissions, and the telephone network of the British Post Office. Sometimes the telephone companies are complicit in this spying, while at other times it is done without the phone company's knowledge.

(Can anyone else on this list provide more information on HARVEST?).

Another article in the same issue describes the NSA's efforts to control cryptologic research in the U.S. This past August, the National Science Foundation withheld funding to USC professor Len

Adleman (one of the developers of the "Rivest code"), claiming that his grant proposal could damage national security. The NSA is willing to fund the grant, but Adleman has refused to accept NSA fundings.

On a more positive note, still another article investigates Sweden's Data Inspection Act. While the U.S. Government uses computers to spy in its citizens, Sweden has elected instead to provide comprehensive protections against the misuse of data banks. The Data Act gives Swedes the right to see ALL computer-stored records about themselves, whether the record-keeping organization involved is public or private. The Swedish Data Inspection Board is empowered to direct any data bank, from credit bureaus to the national intelligence service, to correct its records on an individual if they are in error. Furthermore, no Swedish government agency can use data gathered by a different agency without first notifying the citizens affected by that data.

If anyone else has read the PROGRESSIVE articles or knows more about these topics, please send your comments to HUMAN-NETS.

/Ron
29-Oct-80 10:48:33-MST,6471;000000000001
Date: 29 OCT 1980 0549-EDT
From: DUFFEY
Subject: NSA rebuttals, at&t. V2 #119

Security - Control of Cryptography Research & Speech Understanding & Data Banks, Telephone Deregulation - FCC Computer Inquiry II,

Date: 28 October 1980 1219-EST (Tuesday)
From: Robert.Frederking at CMU-10A (C410RF60)
Subject: The Progressive article

I've read this article. My main impression is that it is loaded with mis-information about computers and NSA. My knowledge about the latter is limited, but what I do know of it was misrepresented. The article was written by a student at U of Arizona at Tucson, who previously "had written on energy subjects" for several other magazines. It is basically a mass of paranoia about the NSA, and has such notable statements as the fact that NSA developed packet-switching (which is made to sound dangerous), and that ARPAnet is used (as a main goal) code breaking and surveillance on people. Also that Josephson Junction computers would be faster and COOLER running than current computers.

Please understand that I am as concerned as anyone about retaining democratic controls over secret government agencies, and preventing illegal mail openings, wiretappings, and covert activities, especially involving computers. But inane articles like this one only serve to discredit these concerns (and those concerned about them), and make serious discussion of the problem more difficult.

As for the Harvest computer, I've heard rumors of such things being used, have no solid information, and would be very interested to know whether such things exist and are being used. It seems to be really state of the art (or better) if they can do what is claimed.

Date: 28 Oct 1980 0310-PST (Tuesday)
From: Lauren at UCLA-SECURITY (Lauren Weinstein)

Subject: Computer spying (horrors!) and FCC telco deregulation

A message in yesterday's HN digest contained a couple of statements that I simply cannot let pass at face value. The message in question discussed the infamous "HARVEST" system (supposedly a product of NSA) and the issue of "computer spying". Let's address these one at a time.

1) HARVEST. Stories of automatic speech understanding systems being used for spying on phone calls (local, toll, or international) have been floating around for ages. Sometime ago in this digest, a discussion took place regarding a system supposedly in use in Great Britain. At that time, I made the rather firm statement that I did not believe such a thing existed, unless we considered human listeners to be the system. I did not (and DO not) believe that the intelligence research agencies have made the quantum leaps over the computer science/business community that such speech understanding systems would require. In fact, in regards to the Great Britain system, I found some literature later which seemed to directly debunk the whole idea, along with "apologies" from one of the publications that had started spreading the rumors in the first place. If our helpful Moderator is up to form, maybe he will insert a reference to the volumes of the digest in which this discussion took place: [HNT V1 #81,82,91] [For additional material on the state of the art in Speech Recognition, refer to [HNT V1 #67-71,80]. For your convenience, transcripts of these materials have been placed in the file AI:DUFFEY;HUMNET SPCHRC.
-- RDD]

Let's face facts -- the sort of speaker independent, continuous speech understanding system that a computerized "spying" mechanism would require does not exist. Current systems are very crude and slow -- they don't even come close. If someone can demonstrate to me that I am wrong about the level of technology in this area, I will gladly admit publicly that I have been in error. But I do not think it will happen.

Technology aside, the simple statement, made in yesterday's digest, that "...the U.S. is using computers to spy on its citizens..." (my paraphrasing) is an alarmist comment with no reasonable basis in fact. Certainly there are some abuses of databanks (both public and private), but comments like that border on the simply irresponsible.

It was related that other countries have laws allowing individuals to inspect/correct personal information in databases. The U.S. has laws like that too. There are also rather strict privacy laws limiting access to such data. Having seen firsthand how such data is kept under control these days by many agencies, I feel RELATIVELY secure. This is NOT to say that more in the areas of privacy and control should not be done. Research in secure and reliable computing systems will go far toward making sure that legal edicts will be technologically enforceable, and the legal basis for such controls should continue to be developed.

We should always look carefully at the realities before yelling "fire". I think that the situation in regards to computer and data security/privacy is developing well. Things could be better, but they could also be far, far worse.

2) FCC and telco. The effects of deregulation on local phone bills is already occuring. General Telephone of California will shortly announce a new $1.00/month charge for each of their phones which you have in your home or office. If you buy your own phone, you can avoid this charge by turning your phone in. Basic flat rate service in being raised an average of about $.75/month. Installation fees for persons who do not simply pick up their phone at the "phone mart" (and this includes everyone getting more than one phone line) is being DOUBLED from around $21.00 to about $42.00. And more increases are in the wings. Similar rates for Pacific Telephone are about to be approved by the PUC, and it can be expected that the rest of the country will follow shortly. How are all these changes being justified? -- To comply with FCC deregulation rulings, of course. Wait 'till you see what the cost of home phone service REALLY is when all the cross-subsidizing ends. You may end up wondering exactly WHO is supposed to benefit from all these "improvements"...

--Lauren--
30-Oct-80 04:38:35-MST,3150;000000000001
Date: 30 OCT 1980 0629-EST
From: DUFFEY
Subject: Ethernet info & NSA, etc.

Date: 29 October 1980 1321-EST (Wednesday)
From: George Marshall
Subject: More on Ethernet

Additional information in response to the request for Ethernet information on HUMAN-NETS:

As John Shoch mentioned, specs are now available from all three companies involved. If you would like receive a copy from Intel, and thus be put on the mailing list for its future announcements of component and/or system- level Ethernet products, send your request to:

Intel Corporation
Ethernet Literature Department
3065 Bowers Avenue
Santa Clara, CA 95051

Date: 29 Oct 1980 12:30 PST
From: Deutsch at PARC-MAXC

On the subject of "rumors" about speech recognition systems, and Lauren's disbelief that the security agencies (or anyone) was far ahead of the published literature: I am told that at the recent IFIP show in Japan, a system was demonstrated that recognized a 1,000-word vocabulary in continuous speech over a telephone with an error rate of 2-3% with no training for adult male speakers. Admittedly, the language was Japanese, which is phonetically a good deal simpler than English. But given NSA's past history of (according to people who have worked there) something like a 5-year lead over published technology, I don't find the capabilities imputed to their system implausible.

Date: 29 Oct 1980 0913-PST
From: John McCarthy <JMC at SU-AI>

Between 1955 and 1961, IBM developed a computer called Stretch briefly marketed as the 7030. It was an advanced computer but was too expensive and didn't meet its speed goals. A variant of this computer called Harvest with the capability of handling data streams was developed by IBM for NSA. It would have been delivered in the early 1960. The computer project was not classified, but there can be no guarantee that the use of the computer coincided with the rumored use - cryptanalysis. There is also nothing to prevent the recycling of a 20 year old computer name. However, the Progressive has so much other wrong information that it's entirely possible that "Harvest" refers to that old computer, which seems unlikely to still be in use.

Date: 29 October 1980 1039-EST
From: Hank Walker at CMU-10A
Subject: NSA

The Progressive article on NSA was ridiculous. In addition to saying that the ARPAnet and IMPs were sinister (dangerous and disturbing as Carter would say), the whole idea of teleputing, computers banding together to spy on people. The article also expressed concern that the FCC was deregulating much of this, allowing private companies to spy of the public. The biggest laugh that I got was the part about computer companies spending lots of effort to crack the others systems for industrial spying. What a joke. I work for DEC part-time, and I would probably keel over in shock if I ever found out of company sponsored attempts to penetrate DG or somebody. Not that some random employee may not have tried.
31-Oct-80 04:18:15-MST,263;000000000001
Date: 31 OCT 1980 0525-EST
From: DUFFEY
Subject: <kaplan>bbn.explanation at sri-kl

As I have received complaints about posting long bboard messages, a more extended discussion can be obtained as <kaplan>bbn.explanation at SRI-KL or by sending me a note.
 6-Nov-80 04:04:50-MST,1379;000000000001
Date: 6 NOV 1980 0544-EST
From: DUFFEY
Subject: News stories on fcc dec/elec.mail

From: The Moderator
Subject: News Stories on Electronic Mail / FCC decision

Copies of newswire stories concerning GTE and Electronic Mail, and the recent FCC decision to continue the Second Computer Inquiry ruling of last April have been established in a file at the sites listed below. Everyone should obtain the file from the site which is most convenient for them. If you are unable to do so, please send mail to HUMAN-NETS-REQUEST@MIT-AI and I will be happy to make sure that you get a copy.

Please obtain your copies in the near future however, since the files will be deleted in one week. A copy of the material will

also be added to the archives. Thanks go to Richard Brodie, Richard Lamson, Doug Philips, Jon Solomon, and Don Woods for providing space for the materials on their systems, and to Geoff Goodfellow and Jim McGrath for making the material available to us.

Site	Filename
MIT-AI	AI:DUFFEY;HUMNET ELMAIL
CMUA	TEMP:ELMAIL.HMN[A210DPOZ]
PARC-MAXC	[Maxc]<Brodie>HUMNET-ELMAIL.TXT
Rutgers	[Rutgers]Ps:<Solomon>Electronic.Mail
SU-AI	ELMAIL.HUM[T,DON]
MIT-Multics	>user_dir_dir>SysMaint>Lamson>human-nets>electronic-mail.text

[Note, you can TYPE or FTP the file from SAIL without an account.]